REMARKS

We refer to and thank the Examiner for the Office Action issued on 29 January 2009.

We thank the Examiner for the decision that claim 39 imports novel and non-obvious features.

We enclose amended claims which are primarily directed to an invention exemplified by the embodiments shown in Figures 2 and 3 which the applicant refers to as "well pots". Claim 1 now incorporates features from original claims 1 to 4. Although the applicant has narrowed the scope of the claims, we wish to note that it has not abandoned other forms of the invention and expressly reserves its right to make those claims the subject of one or more continuations or other applications in the United States.

We note the primary objection is raised in the light of JP 2001-161195 ("Kumakura").

There is a number of features of Kumakura that are important to note. The first feature is that all of the claims and four of the five embodiments shown in the figures require a water holding tank. Therefore, Kumakura will only work in a relatively complex arrangement which necessitates an alignment of diatomaceous earth rods through apertures through both the pot and the water holding tank.

The present applicant's invention by contrast is based on a conventional pot with a configurative alteration that is relatively minor in both cost and manufacturing complexity. However these changes, the present applicant's pot is cheap, transportable and suitable for use across a broad spectrum of applications in both commercial nurseries and home gardens.

The applicant's claimed invention provides a water transferring passage extending from what may be a conventional base aperture and upwards. The applicant's invention therefore has substantially no greater external volumetric demand than a prior art pot.

Perhaps a more important point is that Kumakura would simply not resist root escape. In all the images, there is a clear space between the diatomaceous earth rods and the apertures in the pot. This is logical given the need to access the top of the water holding tank for maintenance issues or to disassemble the unit, perhaps for re-potting or re-planting. Even with the "teeth of the comb" embodiment it would be necessary to have some play to allow alignment of the multiple components held in one position compared to each other and, permitting the receiving apertures to be likewise aligned.

Indirect further support of this submission arises on page 4 of the translation in the second paragraph where it *says "the fired rods... are cylindrical because the water drainage orifices in the base of the plant pot are circular, and moreover, if the rods were made rectangular, the corners would catch and result in damage when the rods were inserted on the base of the plant pot".*

There is no mention of the need for close apposition between the cylindrical rods and the receiving apertures. Spaces between a curve of the orifices and a flat side of a square rod are impliedly acceptable were it not for the "damage" of inserting a square peg into a round hole.

In this regard, the embodiment shown in Figure 5 adds weight to the submission that Kumakura is not adapted to resist root escape. In Figure 5 the bottom wall apertures are clearly shown in typical prior art fashion. Although it appears that bonsai roots are kept relatively stunted, it is clear that a vigorous root growth in embodiment of Figure 5 would penetrate and occlude the apertures and present all the same problems that the applicant's present invention substantially avoids.

Turning now to Kumakura in view of Constance and the 35 U.S.C. 103 (a) objection raised. As noted by the Examiner, Kumakura does refer to a vinyl coating for the cylindrical fired rods. However, the reference in the fourth paragraph of page 4 refers to:

> *When the method of causing water to soak into the soil from the top of the plant pot is employed, that portion of the cylindrical fired rods that is outside the soil may be prevented from coming into direct contact with the air by means of vinyl coatings and the like, which restricts the evaporation of the water from that portion and is also effective in extending the service life of the cylindrical fired rods.*

This refers to item 11 on Figure 5 where the vinyl coating is clearly outside the soil surface and as such contributes nothing to resisting root escape and has no contact with the soil at all. There is simply no comparable structure in the prior art as compared to the present invention. As previously highlighted, the arrangement of Figure 5 does not contribute at all to a resistance of root escape.

Focusing on Constance, the hydroponic garden shown is basically a fluid holding tank with conventional pots arranged in it. The conduit 12 is an enclosed conduit with two end closure caps. Importantly it runs laterally and acts simply as a holding tank. As is apparent from claim 1, the feature of a horizontal conduit is relatively minor in the terms of the invention. As noted in column 2, lines 35-39:

> *In the preferred embodiment, the growing chambers 22 are conventional flower pots having an upright side wall 30 and a bottom wall 32. The bottom wall of the flower pots contains at least one aperture 34 to enable the nutrient solution to fill the growing chambers as will be described.*

The description goes on to describe a pot that is suspended in the conduit with an in and out flow of nutrient fluid. That fluid will penetrate into the vermiculite or other growth medium through the standard flat aperture in the pot. If this arrangement is allowed to proceed for a long enough time it can be reasonably expected that root clogging of the aperture or apertures in the base wall will occur with subsequent impact

on flow characteristics of the nutrient solution and possible damage to the plant once it is removed although it is noted that the hydroponic set up is more about plant product outside the pot rather than seedling or root development.

The combination of Constance with Kumakura will not provide any solution to the problem addressed by the present applicant nor will it render obvious the subtle design changes provided by the inventor.

The final objection relates to Kumakura in view of Constance applied to claims 4-6 and 40-46 and further in view of Ripley *et al.* Ripley is directed to turf growth for stadiax and other surfaces for activities. The invention is directed to turf units and includes means of transporting the units between a first and second location. Although Figures 3 and 4 of Ripley do disclose a mesh, it is simply a meshed box with dividers which arrangement is described at column 4, lines 39-44 as:

> *A soil retaining layer 41 which may be any convenient mesh sheet such as polyethylene, polypropylene or other mesh is also optionally but preferably provided to retain growing medium within the turf unit while permitting the escape of drainage water and the like.*

This is apparent in Figure 5 where the mesh layer 41 sits above drainage apertures 38 and skids 36 and floor regions intermediate the skids. The presence of the baffles 32 does not create a conduit for watering a plant. The description is specifically to an arrangement for growing turf with its intermeshed root system. As noted in the specification at column 4, lines 53-56:

> *The root system, as can easily be appreciated by a person skilled in the art, will interpenetrate the growing medium forming an integrated mass of growing medium and root structure interleaved among the baffle arrangement of the unit.*
>
> *The plants will therefore grow into the baffle arrangement. This does not form a well adapted to resist root escape as claimed by the present applicant.*

It is difficult to see how the mesh can be utilised with Kumakura as Kumakura would require the destruction of that mesh for positioning of a diatomaceous rod.

Further, it is respectfully submitted that Ripley is not suitable for combination with Constance in any way as there is simply no need for a mesh arrangement in the growth chambers of Constance. The mesh serves no root restricting purpose in the absence of an associated impervious wall extended upwardly from the external apertures.

The present applicant has surprisingly found that roots, in the presence of adequate water, are geotropic. This has allowed the inventor to provide an elegant solution to the problem of root clogging of apertures with resultant water drainage derangement and an associated potential for root rot, damage to external roots by intermeshing with support structures and the need for tap root trimming or damage in removal of the plant. The present inventor has observed that those positively geotropic roots that are deflected by the side wall to the base of the pot simply grow around the perimeter of the pot base. Because the growing point of these roots are inclined to grow downwards (positive geotropism) and outwards if possible, they do not have the ability to grow upwards towards the elevated aperture of the central well, where they would again have to change direction and grow downwards. Consequently almost all the roots stay within the pot with only those very few that grow vertically downwards in the middle of the pot and through the aperture, managing to escape. Since the aperture remains largely free of roots its function in the movement of water both into and out of the pot is not compromised by the proliferation of root material as occurs in standard side holed or bottom holed pots.

The present arrangement provides a pot with the outer dimensions of a conventional pot and which is quite compatible with an overhead "watering system" as well as "bottom up watering systems". The present inventor is a research academic of considerable experience and in his conversations with peers, it has generally been a first impression that his "well pot" would be subject to root rot due to retention of the water in the space below the internal aperture. That is a dam effect would be expected to retain water with excessive moisture in that region leading to root rot. Surprisingly it has been found that capillary action tends to drain that water reservoir effectively from the pot

leaving an adequate moisture level without excessive risk to the plants. This is counter intuitive when considered in relation to the teachings of the art.

We thank the Examiner for the careful consideration of this matter. We hope we have addressed all issues raised by the Examiner and provided sufficient reasons as to why the presently claimed invention is both novel and inventive over the cited prior art and also carries with it significant practical and commercial advantages.

While applicant believes that no fee is due in relation to the filing of this paper, the Commissioner is authorized to charge Deposit Account No. 06-2425 in the event that a fee is in fact due.

Respectfully submitted,

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